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10/689,771	10/21/2003	Charles E. Wickersham JR.	CPM-02041 (3600-401-01)	4535

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EXAMINER	
MCDONALD, RODNEY GLENN	
ART UNIT	PAPER NUMBER
1753	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/689,771	WICKERSHAM ET AL.	
	Examiner	Art Unit	
	Rodney G. McDonald	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-13, 29, 43-48, 51, 56, 59-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Ivanov et al. (WO 00/15863).

Regarding claim 1, Ivanov et al. teach a method of forming a sputtering target assembly comprising a backing member and a target member by positioning a member having a bonding side with a plurality of projections, and a member having a bonding side with a plurality of grooves adapted to receive the projections, whereby the projections and the grooves are in substantial registration, and wherein an interface is defined by the bonding surfaces; slidably contacting a portion of at least one projection with a portion of at least one groove; and partially deforming the at least one projection to at least partially fill the at one groove, thereby forming at least one mechanical bond between the target member and the backing member, wherein the member having the grooves is a metal having a melting point higher than that of the metal which comprises the projections. (See Page 5 lines 26-31; Page 6 lines 1-16; Page 7 lines 7-31; Page 8 lines 1-24)

Regarding claim 2, the member having the projections is the target member and the member having the grooves is the backing member. (Page 7 lines 13-17)

Regarding claim 3, the member having the projections is the backing member and the member having the grooves is the target member. (Page 7 lines 13-17)

Regarding claim 4, the member having the grooves can comprise cobalt, titanium, copper, aluminum. (Page 11 lines 3-6; Page 7 lines 13-17)

Regarding claim 7, the member having the projections can comprise cobalt, titanium, copper, aluminum. (Page 11 lines 3-6; Page 7 lines 13-17)

Regarding claim 8, the member having the projections can be copper-chromium alloy. (Page 9 line 11; Page 7 lines 13-17)

Regarding claim 9, the projections can be of irregular shape. (See Fig. 3)

Regarding claim 10, the projections can be substantially cylinders. (See Fig 2; Fig. 10)

Regarding claim 11, the grooves are substantially in the shape of a bowtie. (See Fig. 3)

Regarding claim 12, the bond is formed such that a portion of the bonding side of the target member contacts at least a portion of the bonding side of the backing member. (See Figs. 4-6)

Regarding claim 13, the bond is formed such that a gap is formed between at least a portion of the bonding side of the target member and a portion of the bonding side of the backing member. (See Figs.4-6; The peripheral edge where there is a material interposed between a portion of the bonding side of the target member and a portion of the bonding side of the backing member. This results in a gap between the two members.)

Regarding claim 29, an interlocking bond is formed. (Page 7 line 25)

Regarding claim 43, Ivanov et al. teach a sputtering target assembly having a member having a bonding side with a plurality of projections; and a member having a bonding side with a plurality of grooves, wherein the member having the grooves is a metal having a melting point higher than that of the metal which comprises the projections, and wherein at least one groove is substantially filled by at least one projection such that the members are at least mechanically bonded together. (See Page 5 lines 26-31; Page 6 lines 1-16; Page 7 lines 7-31; Page 8 lines 1-24)

Regarding claim 44, the member having the projections is the backing member and the member having the grooves is the target member. (Page 7 lines 13-17)

Regarding claim 45, the member having the projections is the target member and the member having the grooves is the backing member. (Page 7 lines 13-17)

Regarding claim 46, the bond is formed such that a gap is formed between at least a portion of the bonding side of the target member and a portion of the bonding side of the backing member. (See Figs.4-6; The peripheral edge where there is a material interposed between a portion of the bonding side of the target member and a portion of the bonding side of the backing member. This results in a gap between the two members.)

Regarding claim 47, the gap is less than 0.1 inch. (Page 9 lines 4-6)

Regarding claim 48, a portion of the bonding sides are in contact. (Figs. 4-6)

Regarding claim 51, a interlocking bond is formed between the target and the backing plate. (page 7 line 25)

Regarding claim 56, the member having the grooves can be cobalt, titanium, copper or aluminum. (Page 7 lines 13-17; Page 11 lines 3-6)

Regarding claim 59, the member having the projections can be cobalt, titanium, copper or aluminum. (Page 7 lines 13-17; Page 11 lines 3-6)

Regarding claim 60, the member having the projections can comprise copper-chromium. (Page 7 lines 13-17; Page 9 lines 10-11)

Regarding claim 61, the projections can be irregular in shape. (See Fig. 3)

Regarding claim 62, the projections can be cylinders. (See Fig. 2; Fig. 10)

Regarding claim 63, the grooves can be formed in the shape of bowties. (See Fig. 3)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Ivanov et al. (WO 02/47865).

Ivanov et al. '863 is discussed above and all is as applies above. (See Ivanov et al. discussed above)

The difference between Ivanov et al. '863 and the present claims is that the member having the grooves comprises tantalum (Claim 5, 57).

Regarding claim 5, Ivanov et al. '863 teach that the grooves can be on the target or the backing plate. (Ivanov et al. '863 Page 7 lines 13-20) Ivanov et al. '865 teach a tantalum target joined utilizing salient projections and grooves. (Page 4 paragraph 0018)

The motivation for utilizing tantalum is that it allows for providing a structure which allows high thermal conductivity and lower electrical conductivity than conventional assemblies. (Page 10 paragraph 0048)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by as taught by Ivanov et al. '865 because it allows for producing a structure which allows high thermal conductivity and lower electrical conductivity.

Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Ivanov (WO 02/49785).

Ivanov et al. '863 is discussed above and all is as applies above. (See Ivanov et al. '863 discussed above)

The differences not yet discussed is where the at least one groove has a shape that is different from a shape of at least one other groove (Claim 14), wherein at least one projection has a shape that is different from a shape of at least one other projection (Claim 15), where the at least one groove has a volume that is different from a volume of at least one other groove (Claim 16) and wherein at least one projection has a volume that is different from a volume of at least one other projection (Claim 17).

Regarding claim 14, Ivanov ' 785 teach a groove having a shape that is different from a shape of at least one other groove. (Page 8 paragraph 0036; i.e. the protruding portions and grooves may take on a number of mating shapes)

Regarding claim 15, Ivanov '785 teach a projection having a shape that is different from a shape of at least one other projection. (Page 8 paragraph 0036; i.e. the protruding portions and grooves may take on a number of mating shapes)

Regarding claim 16, Ivanov '785 teach a groove which has a volume that is different from a volume of at least one other groove. (Page 8 paragraph 0036; i.e. the protruding portions and grooves may take on a number of mating shapes)

Regarding claim 17, Ivanov '785 teach a projection which has a volume that is different than a volume of at least one other projection. (Page 8 paragraph 0036; i.e. the protruding portions and grooves may take on a number of mating shapes)

The motivation for utilizing different sizes and shapes of grooves and projections is that it allows for joining the target and backing plate. (Page 8 paragraph 0036)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by as taught by Ivanov '785 because it allows for joining the target and backing plate.

Claims 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Stellrecht (U.S. Pat. 5,342,496).

Ivanov et al. '863 is discussed above and all is as discussed above. (See Ivanov et al. '863)

The differences not yet discussed is the friction welding (Claims 18, 23, 28) and conditions for friction welding (Claims 19, 20, 21, 22, 24, 25, 26, 27).

Regarding claims 18, 23, 28, Stellrecht teach a friction welding machine which rotatably joins a backing plate and target. (Column 4 lines 1-68; Column 5 lines 1-20)

Regarding claims 19, 20, 21, 22, 24, 25, 26, 27, the rotation speed can be 1,000-2,000 surface ft/min. The rotational speed can be up to 3,500 rpm. The maximum force is 175,000 lbs. This force would translate to Applicant's required joining force and rotational energy. (Column 4 lines 1-68; Column 5 lines 1-20)

The motivation for utilizing friction welding is that it allows for improving thermal expansion and cooling properties of the target. (Column 2 lines 55-58)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by utilizing friction welding as taught by Stellrecht because it allows for improving thermal expansion and cooling properties of the target.

Claims 30-33 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Kunihiro et al. (Japan 61-291967)

Ivanov et al. '863 is discussed above and all is as applies above. (See Ivanov et al. discussed above)

The differences between Ivanov et al. '863 and the present claims is that the use of a solder material on at least one projections or projections is not discussed (Claim 30, 31, 52, 54) and that the use of a solder material on at least one groove or grooves is not discussed. (Claims 32, 33, 53, 55)

Regarding claim 30-33, 52-55, Kunihiro et al. teach providing a solder material of In alloy on the projections and the grooves. (See Kunihiro et al. Abstract)

The motivation for utilizing a solder material on the projections and grooves is that it allows for bonding the metal directly to a backing plate. (See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by utilizing solder on projections or grooves as taught by Kunihiro et al. because it allows for bonding the metal directly to a backing plate.

Claims 34-36, 38, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Wegmann (U.S. Pat. 4,983,269).

Ivanov et al. '863 is discussed above and all is as applies above. (See Ivanov et al. '863 discussed above)

The difference between Ivanov et al. '863 and the present claims is the use of a cell. (Claims 34, 35, 36, 38, 49, 50)

Regarding claims 34, 35, 36, 38, 49, 50, Wegmann teach forming a cell member having a plurality of sides where the cell member is proximate to the interface of the target and the backing plate. (See Fig. 8) One of the cell sides can constitute a portion of the bonding side of the backing plate. (See Fig. 8) A gas can be disposed inside the cell which can be the same as the sputtering process atmosphere. (Column 4 lines 1-22) The gas can be at any pressure including atmospheric. (Column 4 lines 4-10)

The motivation for providing a cell is that it allows for detecting erosion. (Column 3 lines 23-27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by utilizing a cell as taught by Wegmann because it allows for detecting erosion of the targets.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. '863 in view of Wegmann as applied to claims 34-36, 38, 49, 50 above, and further in view of Stellrecht (U.S. Pat. 5,342,496).

The difference not yet discussed is the use of Ar.

Wegmann discussed above already teach using in the cell the same gas as is used in the sputtering chamber. (See Wegmann discussed above) Stellrecht teach that Argon can be used as the sputtering gas. (Stellrecht Column 5 lines 50-55)

The motivation for utilizing argon is that it allows for sputtering target. (See Stellrecht Column 5 lines 50-55)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized argon in the cell as taught by Wegmann and Stellrecht because it allows for sputtering the target.

Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Hunt et al. (U.S. Pat. 5,836,506).

Ivanov et al. '863 is discussed above and all is as applies above. (See Ivanov et al. '863 discussed above)

The differences between Ivanov et al. '863 and the present claims is that forming the sputter target under a cover gas is not discussed (Claim 39), the cover gas comprising an inert gas is not discussed (Claim 40), the inert gas being argon is not discussed (Claim 41) and the cover gas being doped with oxygen or nitrogen is not discussed (Claim 42).

Regarding claim 39, forming the target under a cover gas. (Column 9 lines 18-35)

Regarding claim 40, the cover gas can be an inert gas. (Column 9 lines 18-35)

Regarding claim 41, the cover gas can be argon gas. (Column 9 lines 18-35)

Regarding claim 42, the cover gas can be doped with oxygen since an oxide film can exist on the target. (See Ivanov et al. '863 Page 6 lines 6-8)

The motivation for utilizing a cover gas is that it allows for joining the target and the backing plate. (Column 9 lines 18-35)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. '863 by utilizing a cover gas as taught by Hunt et al. because it allows for joining the target and the backing plate.

Claims 6 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ivanov et al. (WO 00/15863) in view of Ohhashi et al. (U.S. Pat. 5,693,203).

The difference not yet discussed is the use of niobium (claims 6, 58).

Regarding claims, 6 and 58, Ohhashi et al. teach a target made of niobium. (Column 6 line 4)

The motivation for utilizing a target of niobium is that it allows for depositing films of niobium. (Column 6 line 4)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ivanov et al. by utilizing a niobium target as taught by Ohhashi et al. because it allows for depositing films of niobium.

Response to Arguments

Applicant's arguments filed November 1, 2006 have been fully considered but they are not persuasive.

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 1-4, 7-13, 29, 43-48, 51, 56, AND 59-63 AS ANTICIPATED BY IVANOV ET AL. (WO 00/15863):

In response to the argument that Ivanov et al. '863 fails to teach that the member having the grooves is a metal having a melting point higher than that of the metal which is comprised of projections, it is argued that in Figs. 2-5 Ivanov et al. '863 teach a

grooved member which can be joined to a member having projections. The member having the projections can be an Aluminum target. The member having the grooves can be a Copper target. Since Aluminum has a melting point of about 660 degress C and Copper has a melting point of about 1084 degrees C the member having the projections has a higher melting point than the member having the grooves. (See Ivanov et al. '863 discussed above; Ivanov et al. '863 page 7 lines 7-31; Figs. 2-5)

In response to the argument that Ivanov et al. '863 teach that there is no gap formed between at least a portion of the bonding side of the target member and a portion of the bonding side of the backing member, it is argued that there is a gap between the at least a portion of the bonding side of the target member and a portion of the bonding side of the backing member and that the gap is filled with another material at the periphery of the target. (See Ivanov et al. Figs. 4-6)

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 5 AND 57 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF IVANOV ET AL. (WO 02/47865):

In response to the argument that Ivanov et al. '865 method is incompatible with the method of Ivanov et al. '863, it is argued that the methods are combinable since one would seek to produce targets having high termal conductivity and lower electrical conductivity.

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 14-17 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF IVANOV ET AL. (WO 02/49785):

In response to the argument that Ivanov et al. '785 does not teach that two different grooves can be present on the same mating surface, it is argued that since Ivanov et al. '785 suggest that the grooves can be of any shape that the grooves could be shaped differently. (See Ivanov et la. '785 discussed above)

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 18-28 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF STELLRECHT:

In response to the argument that Stellrecht's method is incompatible with the method of Ivanov et al. '863, it is argued that the methods are combinable because one would look for a method to join targets to backing plates for improving the thermal expansion and cooling properties of the target. (See Stellrecht discussed above)

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 30-33 and 52-55 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF KUNIHIRO:

In response to the argument that Kunihiro's method is incompatible with the method of Ivanov et al. '863, it is argued that the method are combinable since one of ordinary skill would look to bond the metal directly to a backing plate. (See Kunihiro discussed) The Examiner has relied on the Abstract of Kunihiro but Applicant has requested an English translation of the document. The Examiner has requested an English translation and it will follow in due course.

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 34-36, 38, 49 and 50 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF WEGMANN:

In response to the argument that there is no motivation for modifying Ivanov '863 with Wegmann's means for erosion detection, it is argued that the motivation for modifying Ivanov '863 with Wegmann's feature is that it allows for detecting erosion during the course of normal sputtering operation. (See Ivanov '863 and Wegmann discussed above)

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 37 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF WEGMANN AND FURTHER IN VIEW OF STELLRECHT:

In response to the argument that Ivanov et al. '863 does not teach the claimed invention and that Wegmann and Stellrecht do not overcome these deficiencies, it is argued that Ivanov' 863 as discussed above teach the claimed invention and that Wegmann and Stellrecht teach the secondary features. (See Ivanov et al. '863, Wegmann and Stellrecht discussed above)

RESPONSE TO THE ARGUMENTS BASED ON THE REJECTON OF CLAIMS 39-42 AS OBVIOUS OVER BY IVANOV ET AL. (WO 00/15863) IN VIEW OF HUNT ET AL.:

In response to the argument that Ivanov et al. '863 does not teach the claimed invention and that Hunt et al. do not overcome these deficiencies, it is argued that

Ivanov' 863 as discussed above teach the claimed invention and that Hunt et al. teach the secondary features. (See Ivanov et al. '863 and Hunt et al. discussed above)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M- Th with Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rodney G. McDonald
Primary Examiner
Art Unit 1753

RM
January 16, 2007